UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,081	08/07/2001	Dong-Kwan Kim	51876p267	3070

8791 7590 08/31/2004	EXAMINER
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030	MITCHELL, JASON D

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 08/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Office Action Summary	09/925,081	KIM ET AL.	
	Examiner	Art Unit	
	Jason Mitchell	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 August 2001</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-9</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>07 August 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☒ Some * c)☐ None of:

    1.☒ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>08/07/01</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This application claims priority to a foreign application (Korea 2001-1943) filed on

01/12/2001. For priority to be perfected an English translation must be submitted,

Therefore, priority date is considered to be the filing date (08/07/2001).

Claims 1-9 are pending in this case.

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which

is old is illustrated, as indicated by the applications brief description of the drawings ('a

conventional enterprise java bean based software development process'). See MPEP

§ 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: there are many

instances of incorrect grammar (i.e. claim 5, line 4 'whether or not to generating the

extracted classes'). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Regarding Claim 5: The claim describes 'determining whether or not generating the

extracted class' and does not explain what criteria this decision is based on. This must

be included for the claim to particularly point out what is being claimed. For the

purposes of this action the claim will be addressed as it's broadest reasonable meaning,

in this case a person making random decisions.

Regarding Claim 7: The claim states 'Taking out business logic operations ... from an

extracted empty class.' If the class is empty there is no business logic to be taken out.

This makes it unclear what is being claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

2002/0147763 to Lee at al (Lee) in view of Lieberman "Using Prototypical Objects to

Implement Shared Behavior in Object Oriented Systems" AMC September 1996

(Lieberman)

Regarding Claims 1, 4 and 9: Lee discloses an apparatus, method and computer

program product for generating enterprise java beans (par. [0012] 'creates a set of

classes ... with reference to the Enterprise JavaBeans specification') based on a class

diagram. Lee additionally discloses a class diagram receiving means for receiving the

class diagram (par. [0014] 'Generates code for Enterprise JavaBeans components from

... an UML model'). Further Lee discloses, inherently, inheritance relationship removing

means for eliminating an inheritance relationship. Lee 'creates a set of classes ... with

reference to the Enterprise JavaBeans specification' (par. [0112]), the EJB v1.1 does

not support component inheritance. Inheritance relationships are included in Lee's UML

model (par. [0140] 'An inheritance is depicted on a UML diagram') Therefore at some

point in the generation process the relationship must have been removed. Further Lee

discloses an enterprise java bean extracting means for extracting the enterprise java

beans (par. [0030] 'generating the Java source code from UML models'), and enterprise

java bean interface generating means (par. [0148] 'generates at least one interface') for

producing a remote interface (par. [0161] 'class's remote interface') and a home

interface (par. [0156] 'has a home interface'). Further Lee discloses enterprise java

bean grouping means (par. [0144] 'packages are used to group classes') for grouping

enterprise java beans related to each other. (par. [0144] 'in to a hierarchy') But, Lee

does not disclose a façade pattern applying means.

Lieberman teaches a façade pattern applying means (pg. 218, col. 2, par. 4 'We can

create special class objects') for applying a façade pattern thereby unifying external

interfaces, in an analogous art for the purpose of gaining 'added power and flexibility'.

(pg. 223, col. 1, par. 1)

It would have been obvious to a person of ordinary skill in the art at the time of the

invention to apply a façade that represented removed inheritance relationships with a

delegation technique, as taught by Lieberman (pg. 218, col. 2, par. 4 'It is easy to see

how we could implement the functionality of inheritance'), using the aggregation

relationship disclosed in Lee (par. [0141] 'An aggregation is used to describe a

containment relationship between classes').

The modification would have been obvious because one of ordinary skill in the art would

have been motivated to provide a façade as described above that could represent the

inheritance relationships that had to be removed, and according to Lieberman 'It is easy

to see how we could implement the functionality of inheritance'. (pg. 218, col. 2, par. 4)

Regarding Claim 2: The rejection of claim 1 is incorporated, further; Lee discloses

mapping a class, which is stored in a database and should maintain its persistence, to

an entity bean, (par. [0113] 'An Entity...is an object with staying power.') and a class

whose persistence does not need to be guaranteed to a session bean. (par. [0108]

'Session components...are used to model service-oriented objects'.)

Regarding Claim 3: The rejection of claim 1 is incorporated, further; Lee discloses

producing a primary key (par. [0165] 'For Entity Components, the Smart Generator

generates ... Primary Key...') if a class is mapped to an entity bean.

Regarding Claim 5: The rejection of claim 4 is incorporated; further, Lee discloses,

extracting classes from the class diagram and determining whether or not to generate

the extracted classes to Enterprise JavaBeans (par. [0148] 'Only classes in the model

that are stereotyped as eBusiness Smart Components will result in ... Java clases').

Further, Lee inherently discloses if it is determined that the extracted classes are not

generated to Enterprise Java Beans, returning to the step (b1). Each class in the model

must be addressed (par. [0014] 'stereotypes each EJB class into one or more EJB

components') so it is inherent that once a class has been looked at the process would

continue with the next class. Further Lee creates both Entity beans (par. [0113] 'An

Entity') and Session beans (par. [0108] 'Session components'), with the distinction

being persistence (par. [0113] 'Persistence is the key'). At some point in the process the

decision must be made which type of Bean should be generated from any given class in

the diagram. Therefore Lee inherently discloses deciding if the persistence of the

extracted classes is guaranteed. If the extracted classes have persistence, generating

the detected classes to Enterprise Java Beans (par. [0113] 'An Entity'), and if the

extracted classes do not have persistence producing session beans (par. [0108]

'Session components').

Regarding Claim 6: The rejection of claim 5 is incorporated; further, Lee discloses

extracting the classes having persistence (par. [0113] 'An Entity'); deciding whether said

extraction is either property extraction to be stored in a database (par. [0113]

'information persistently stored in a database') or operation extraction (par. [0108]

'service oriented objects'); if said extraction is determined to be property extraction ,

generating an entity bean (par. [0113] 'An Entity') by extracting a property to be stored

in the database and if said extraction is decided to be operation extraction, producing a

session bean (par. [0108] 'Session components') by extracting an operation.

Regarding Claim 7: The rejection of claim 4 is incorporated; further, Lee discloses

taking out business logic operations (par. [0161] 'any method it wishes') related to a

problem region from an extracted empty class; adding the extracted business logic

operations to a remote interface (par. [0161] 'any method it wishes'); adding operations

related to the enterprise java bean generation and detection to a home interface (par.

[0156] 'methods for creating ... finding'); and identifying the extracted enterprise java

bean as an entity bean and adding a primary key class (par. [0148] 'generates an ...

primary key'.).

Regarding Claim 8: The rejection of claim 7 is incorporated; further, Lee discloses

determining whether there is a class relationship (par. [0144] 'packages are used to

group classes'); if it is determined that there is a class relationship, extracting the class

relationship and deciding if the class relationship is an inheritance relationship (par.

[0144] 'in to a hierarchy'); if it is decided that the class relationship is an inheritance

relationship, grouping an upper class and a lower class (par. [0144] 'in to a hierarchy')

which establish the inheritance relationship with each other and proceeding to step (d1),

and if otherwise checking out whether the class relationship is an aggregation

relationship ([0141] 'An aggregation is used to describe a containment relationship') or

not; if the class relationship is determined as the aggregation relationship, grouping a

whole class ([0104] 'typically a Session or Entity') and a part class ([0104] 'A Belonging

... must "belong" to ... another object') which establish the aggregation relationship with each other and then returning to step (d1) and if otherwise, going to step (d1)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (703)305-0064. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Mitchell
Patent Examiner
7/30/2004

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